

Florida Avenue Corridor Study- Study of Marine Traffic through the Inner Harbor Navigational Canal at Florida Avenue

FINAL REPORT

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Introduction and Objective

In 1989, the Louisiana Legislature created the Transportation Infrastructure Model for Economic Development (TIMED) program which identified sixteen (16) highway, bridge and multi-modal projects to be completed through funding by a fuel tax at four cents per gallon. The “New Florida Avenue Bridge over the Industrial Canal” is one of these sixteen identified projects. The Louisiana Department of Transportation and Development (LADOTD), with consideration for the provisions of the TIMED legislation, proposed to build a new bridge to provide reliable vehicular access over the Inner Harbor Navigation Canal (IHNC) in the Florida Avenue corridor through Orleans and St. Bernard Parishes.

The main issue involved with the development of a new bridge at Florida Avenue is that the new bridge must provide a reliable vehicular crossing of the IHNC through the use of a fixed span or moveable span that opens infrequently if at all. The existing rail/vehicular bridge has a low vertical clearance over the mean high water elevation in the IHNC which requires it to open for all marine traffic. In 2007, a proposed alternative was identified in the *Final Environmental Assessment (EA) - New Florida Bridge over the Inner Harbor Navigational Canal* to provide this reliable vehicular crossing. Due to budget limitations, the selected alternative is being reevaluated in an effort to identify cost savings.

As part of the EA previously mentioned, a separate study on marine traffic through the IHNC was conducted to determine the optimum vertical clearance and operations for a reliable vehicular crossing at Florida Avenue. Since the completion of this study, there have been several significant changes in marine traffic patterns throughout the region.

The objective of this study is to reevaluate these traffic patterns and compile information on the current and anticipated navigational needs of commercial and private marine industries along the Inner Harbor Navigational Canal (IHNC) at Florida Avenue in an effort to determine whether a lower vertical clearance is feasible. Clearance height and span length are two of the largest contributing factors in a bridge’s superstructure and ultimately, its cost. A bridge with a lower clearance would not only yield significant cost savings, but will also reduce the bridge’s secondary effects on the surrounding population and infrastructure.

Methodology

The following sources were used to assist in the development of this report:

- Coordination with the Port of New Orleans and marine industries
- Review of previous marine traffic and bridge feasibility studies within the canal area
- Review and analysis of current bridge tender reports for Judge Seeber (Claiborne Avenue) and Florida Avenue Bridges
- Review of *Port of New Orleans 2020 Master Plan*
- Review of US Army Corps of Engineers (USACE) documents and reports

Background on IHNC and Connecting Waterways

Inner Harbor Navigational Canal (IHNC)

The Inner Harbor Navigational Canal, or the Industrial Canal, was constructed in 1923 mainly for the purpose of providing a direct navigational waterway between New Orleans and the Gulf of Mexico. The IHNC is 5.1 miles long, 400 feet wide, 30-feet deep and connects Lake Pontchartrain, the Gulf Intracoastal Waterway (GIWW) and the recently de-authorized Mississippi River Gulf Outlet (MRGO). The IHNC also divides the upper and lower Ninth Wards. The Board of Commissioners Port of New Orleans currently owns 1,200 acres that make up the IHNC. Approximately 700 acres of developed land along the IHNC are leased or available for lease to industrial and commercial users.

The Gulf Intracoastal Waterway (GIWW)

The Gulf Intracoastal Waterway (GIWW) was constructed in the 1920's. The GIWW traces the U.S. coast along the Gulf of Mexico from Apalachicola Bay near Carrabelle, Florida to the Mexican border at Brownsville, Texas. From its intersection with the Mississippi River, the waterway extends eastward for approximately 376 miles and westward for approximately 690 miles. The US Army Corps of Engineers (USACE) maintains the GIWW at a 12 feet depth and 150 foot width. The GIWW and MRGO intersect and run contiguously from the Michoud area to the IHNC (USACE16).

The Mississippi River Gulf Outlet (MRGO)

The Mississippi River-Gulf Outlet (MRGO) was authorized by a March 29, 1956 Act of Congress (Public Law 84-455) to provide an emergency outlet from the Mississippi River and a safer, shorter route between the Port of New Orleans and the Gulf of Mexico. The channel was de-authorized in 2008 and closed in 2009. Prior to its de-authorization, the MRGO connected the Inner Harbor Navigational Canal (IHNC) to the 38-foot depth

contour in the Gulf of Mexico. The MRGO was 36-feet deep and 500-feet wide. A portion of the MRGO waterway, The Bar Channel, was 38 feet deep and 600 feet wide.

Existing Vehicular Bridges

The existing Florida Avenue, Judge Seeber (Claiborne Avenue) and St. Claude Avenue bridges are located along the lower Inner Harbor Navigational Canal (IHNC). These bridges provide access to the Lower Ninth Ward and the populated areas of Arabi and Chalmette, Louisiana located in St. Bernard Parish from New Orleans. Alternative routes to the Lower Ninth Ward and St. Bernard Parish are accessed via ferry or from Paris Road (LA 47) to I-510/I-10. **Appendix A** provides the location of the three existing bridges.

The three existing bridges all operate with movable span structures. The Judge Seeber and Florida Avenue bridges operate vertical lift span structures with a vertical clearance of 156 feet.

The existing Florida Avenue Bridge provides rail and two lanes for vehicular traffic. Marine vessels are provided with a 300 foot horizontal clearance and a vertical clearance of approximately 5 feet in the closed position. The diagram presented in **Appendix B** provides dimensions and clearances for the existing Florida Avenue Bridge. The design concept selected from the *2007 Final Environmental Assessment- New Florida Bridge Over the Inner Harbor Navigational Canal* proposed a LADOTD UA-3 roadway classification with a 4-lane divided roadway on a fixed span bridge. The proposed fixed span bridge provided a minimum of 156 feet in vertical clearance over a maximum high water elevation of +5.0 NVGD. This provided a reliable crossing over the Inner Harbor Navigation Canal (IHNC) in the event of an evacuation and for daily commuting. This concept had tremendous support amongst local officials and residents but due to budget limitations, the concept required re-evaluation to identify potential cost savings by reducing the required vertical clearance. Potential reductions in the proposed 156 feet vertical clearance will be identified through analyzing and evaluating bridge tender reports from 2010 and 2011.

The existing Judge Seeber Bridge provides four lanes for vehicular traffic on the existing LA 39 Highway. Marine vessels are provided with a 305 feet horizontal clearance and 40 feet of vertical clearance in the closed position. After Hurricane Katrina in 2005, the bridge suffered extensive damage to its structure. Since then, the Louisiana Department of Transportation and Development (LADOTD) has made efforts towards restoring the bridge. In 2010, LADOTD closed the bridge for two months to repair the bridge's mechanical and electrical system, replace damaged beams and replace bridge decking. Additional improvements were made to the bridge and required drivers to detour via the

St. Claude Avenue Bridge or the Florida Avenue Bridge. In May of 2011, repairs were completed and the bridge was re-opened providing access for drivers over the bridge.

The existing St. Claude Avenue Bridge is a single bascule bridge providing four lanes for vehicular traffic on the existing LA 46 Highway. Marine vessels are provided with a horizontal clearance of 75 feet and a 16 foot vertical clearance in the closed position. The bridge also provides unlimited vertical clearance in the open position. The diagram presented in **Appendix C** provides dimensions and clearances for the existing St. Claude Avenue Bridge.

Maritime Travel Patterns

The Mississippi River, the GIWW, the IHNC and the recently de-authorized MRGO have been major sources for heavy maritime travel. The Port of New Orleans currently provides 20 million square feet of cargo handling, 3.1 million square feet of covered storage and 1.7 million square feet of cruise and parking facilities along these waterways. Although these major navigational channels are used by vessels for commercial and industrial business, long term effects of Hurricane Katrina and the increase in facility use have resulted in significant changes in marine traffic patterns throughout the region.

Before the de-authorization and final closure of the MRGO in 2009, the man-made waterway provided a shorter route from the Gulf of Mexico to the Port of New Orleans. With its closure, the Gulf of Mexico can be accessed from Lake Pontchartrain, through the Rigolets and then connecting to Lake Borgne. The GIWW also provides access to the Gulf but with the majority of the channel maintaining an authorized depth of only 12 feet, marine traffic is limited to mainly shallow-draft vessels. The IHNC, which is located between the Mississippi River and the MRGO on the GIWW, provides access to Port facilities located along the IHNC through the existing IHNC lock. Issues with the size of the existing lock (31.5 feet deep, 75 feet wide and 640 feet long) have long affected maritime travel since the authorization of the MRGO in 1956. The size restrictions of the existing lock required all deep-draft shipping facilities to be accessed through the MRGO. Identifying how the de-authorization of the MRGO and the existing lock affect maritime travel will assist in identifying the feasibility of a lower vertical clearance requirement for the Florida Avenue Bridge.

Effects of the MRGO De-Authorization and Closure

As previously mentioned, the Mississippi River Gulf Outlet (MRGO) was authorized on March 29, 1956 by an Act of Congress and was opened to full capacity in 1968. The purpose in constructing the man-made waterway was to provide a shorter route between

the Gulf of Mexico and the Port of New Orleans. Prior to its construction, the majority of travel to the Port was through the Mississippi River. The channel extended to the 38-foot depth contour of the Gulf of Mexico and connected with the Gulf Intracoastal Waterway (GIWW) for 5.5 miles into the IHNC. The MRGO also provided deep-draft access with an authorized depth of 36 feet and a width of 500 feet. The authorized depth and width of the MRGO was accomplished through dredging over the course of 8 years through local swamps and marshland. The Federal Government, who was responsible for maintaining the MRGO, implemented foreshore protection to stabilize portions of the north and south shores of the channel.

Since its opening, the channel provided a safe route for all commercial and industrial vessels, contributing to the overall percentage of regional and international commerce. After its peak in 1978, the overall usage of the channel decreased. According to US Army Corps of Engineers (USACE), annual cargo tonnage and vessel traffic through the channel decreased since 1978. Along with vessel traffic being less than expected, the Federal government simultaneously funded annual costs to maintain the channel. The *MRGO Deep Draft De-Authorization Study* completed by the USACE in 2007, states that direct costs for the MRGO have totaled over \$580 million dollars and \$12.5 million in annual maintenance costs. In the event of hurricanes and tropical storms, additional costs were required to restore the MRGO to its authorized dimensions.

After the devastating winds and surge of Hurricane Katrina, the depth of the channel was reduced to 22 feet due to severe shoaling experienced during the storm. The USACE performed cost analysis to identify expenditures needed to dredge the channel to its original authorized dimensions, but due to decreases in use and maintenance costs, no formal plans were made to restore it. After the US Congress passed two laws providing \$75,000,000 towards restoring wetlands and preventing saltwater intrusion and storm surges, efforts were made towards de-authorizing deep-draft in the MRGO and to create marshland and shoreline protection in waterways along the channel.

Ultimately, the MRGO was officially de-authorized after submitting the *MRGO Deep Draft De-Authorization Study* to the US Congress in 2008. The recommended plan for the complete closure was a structure made completely of rock located from the south ridge of Bayou Loutre in St. Bernard Parish. The structure is approximately 950 feet in length with a top width of 12 feet and elevation of +7 feet NAVD 88. The side slopes of the structure are at a 1:2 slope providing a 450 foot bottom width. Construction of the structure was completed in July 2009.

The closure of the MRGO has tremendous effects on maritime travel. The most significant effect is the lack of deep-draft navigation for the Port of New Orleans. Vessels requiring deep draft access traveled the MRGO to transport commodities to and from the Port and other marine facilities. Without the MRGO, the majority of deep-draft access is limited to the Mississippi River. This has the potential to reduce the frequency of vessels

requiring deep-draft access and vertical clearances near the current 156 foot vertical height requirement of the Florida Avenue Bridge.

Effects of the Existing IHNC Lock Parameters

According to the *Supplemental Environmental Impact Statement – Inner Harbor Navigation Canal Lock Replacement Project*, the existing IHNC lock has become inadequate and unable to accommodate significant marine vessel traffic traveling the IHNC. The existing lock (31.5 feet deep, 75 feet wide and 640 feet long) causes major delays in vessel traffic due to frequent closures and congestion. Since the closure of the MRGO, the IHNC lock is the only option for vessels traveling between the GIWW and the Mississippi River. According to the *Supplemental Environmental Impact Statement – Inner Harbor Navigation Canal Lock Replacement Project*, there has been a significant increase in average delays even though there is decrease in barge traffic, total lockages and total vessels utilizing the IHNC lock. In 2009, the USACE anticipated delays to average approximately 8 hours for 67 percent of all vessels traveling through the IHNC lock. Without major improvements, the existing parameters of the lock affect the growth of marine industries within the region by limiting the size of vessels to 31.5 feet in depth.

In 1997, an EIS analyzing alternatives for a new lock was completed. However, after the effects of Hurricane Katrina, the Federal District Court, Eastern District of Louisiana required that the alternatives evaluated in the 1997 EIS be re-evaluated due to changes in the existing conditions. Revisions to the recommended plan were presented in the *Supplemental Environmental Impact Statement – Inner Harbor Navigation Canal Lock Replacement Project*. The Recommended Plan as described in the Record of Decision for the *Inner Harbor Navigation Canal Lock Replacement Project* is as follows:

- *A new 110 foot wide, 1,200-foot long and 36-foot deep lock in the IHNC north of the existing Claiborne Avenue Bridge.*
- *Replacement of the existing St. Claude Avenue Bridge with a low-level, double-bascule bridge and modifications to the Claiborne Avenue Bridge to make it compatible with a new lock.*
- *Utilization of two separate construction locations, the off-site construction area and a new site. The off-site construction is located on the south bank of the GIWW at the Paris Road Bridge and would allow for lock module construction in a dry environment and lock modules would be floated to the lock construction site.*
- *Extension of the Mississippi River floodwalls and levees from the existing lock to the new lock location.*
- *Disposal of large volumes of material hydraulically dredged during lock construction.*

- *Construction of a confined disposal facility for placement of both stockpiled sediments and contaminated sediments.*
- *Implementation of a community impact mitigation plan.*
- *Implementation of a wetland mitigation plan.*

IHNC Port Facilities

The Port of New Orleans, which is located in the southeast region of Louisiana at the mouth of the Mississippi River, is one of the leading sources for domestic and foreign waterborne commerce. The Port provides facilities for all marine industries including a cargo facility used for importing coffee, rubber, plywood and steel. Facilities on the IHNC include the France Road Container Terminal Berth 1, the France Road Container Terminal 4 & 5 and the Jourdan Road Terminal. The *Port of New Orleans 2011-2012 Port Directory* provides a map of the existing IHNC Port Cargo Facilities. This map along with additional facility information is provided in **Appendix D**.

After the effects of Hurricane Katrina and the subsequent closure of the MRGO in 2009, the Port suffered severe damage to its facilities on the IHNC and essentially marine industry operations were reduced. The majority of the hurricane's damage was suffered by the facilities located on the IHNC and MRGO. Along with the effects of severe damage to Port facilities on the IHNC, the de-authorization of the MRGO has also affected Port facilities. The Port states that with the closure of the MRGO, several tenants will no longer continue the operation of deep-draft vessels. The largest vessel to be accommodated will be limited to the parameters of the existing IHNC lock.

The significant change in maritime travel affects both the Jourdan Road and France Road Terminals of the IHNC. According to the Port of New Orleans 2020 Master Plan, extensive planning by the Port has been underway to relocate all MRGO and IHNC facilities to Mississippi Riverfront property. The Jourdan Road Terminal currently transports commodities by truck to deep-draft facilities located on the Mississippi River. With relocating to the Mississippi River, the port has the opportunity to expand its cargo business; therefore, potentially reducing the frequency of vessels requiring vertical clearances near the current 156 vertical height requirement of the Florida Avenue Bridge.

The Port of New Orleans submitted a letter to LADOTD on October 11, 2011 expressing their concerns for potential affects on existing port-owned facilities along the IHNC in reference to the consideration of a lower bridge clearance. Please refer to **Appendix E** for the referenced letter.

Florida Avenue Bridge Tender Reports

Bridge tender reports were analyzed for the Florida Avenue Bridge between the months of November 2010 to July 2011 in an effort to identify (1) the average number of marine vessels passing through the IHNC at Florida Avenue, (2) the percentage in which the bridge is unavailable to vehicles, (3) the number of bridge closings per day and (4) vessel sizes and heights. Upon review of the bridge tender reports, it was determined that vessel heights could not be provided for this bridge. It was concluded that vessel heights would not be available since the existing bridge is required to open for all vessels due to its low closed position height.

Results of the Florida Avenue bridge tender report analysis is presented in **Table 1**:

TABLE 1

Florida Avenue Vessel Passage and Bridge Closure Data (Average)

November 2010-July 2011

	NOVEMBER 2010	DECEMBER 2010	JANUARY 2011	FEBRUARY 2011	MARCH 2011	APRIL 2011	MAY 2011	JUNE 2011	JULY 2011
# of Vessels Passing Thru Channel Per Day (Avg.)	29.9	30.0	27.0	26.1	30.8	33.2	35.0	33.7	36.3
Bridge Closure to Vehicular Traffic Per Day (Avg Min. per Closure)	9.1	9.5	10.2	12.3	9.3	8.1	7.8	8.7	8.7
Number of Bridge Closings Per Day (Avg)	18.3	20.3	16.5	17.4	19.6	21.8	21.1	21.2	22.2
Bridge Not Available to Vehicular Traffic Per Month (Avg)	9.6%	11.5%	10.0%	12.1%	10.8%	10.0%	10.1%	10.2%	9.2%

The bridge tender reports for Florida Avenue provided the types of vessels that passed through the bridge. The following is a list of those vessels:

- Tug/ Barge Tows
- US Coast Guard Vessels
- Pleasure Boats (motorboats, sailboats, small boats, etc.)
- Commercial Fishing Boats (shrimp boats, trawlers, oyster boats, etc.)
- Service Vessels (crew boats, light boats, survey, etc.)
- Ships (Cargo, etc.)
- Oil-Drilling Barges (Jack-Up rigs, etc.)

Table 2 provides the number of vessels recorded for each vessel type. The number of vessels for each month is totaled to determine the overall percentage of each vessel type between November 2010 and July 2011.

TABLE 2
Vessel Types Passing Through Florida Avenue Bridge
November 2010 – July 2011

MONTH:	Tug/Barge Tows	USCG	Pleasure Boat/Sail Boat	Crewboat	Shrimpboat/Trawler /Oysterboat	Ship	Jack-Up
NOVEMBER 2010	826	1	14	2	18	7	0
DECEMBER 2010	835	3	10	2	28	2	1
JANUARY 2011	758	5	4	0	14	3	0
FEBRUARY 2011	644	2	4	0	8	7	0
MARCH 2011	805	6	14	2	15	3	0
APRIL 2011	850	1	19	0	13	6	0
MAY 2011	948	2	7	6	28	6	0
JUNE 2011	866	3	19	3	23	8	0
JULY 2011	1016	3	17	5	10	6	0
TOTAL	7548	26	108	20	157	48	1
PERCENT (%)	95.45	0.33	1.37	0.25	1.99	0.61	0.01

Judge Seeber Bridge Tender Reports

Bridge tender reports were analyzed for the Judge Seeber Bridge between the months of November 2010 to July 2011 in an effort to identify vessel heights and sizes. The vessel heights were provided in the tender reports along with the duration of bridge openings. Based on the information provided, the range in vessel heights was determined for all vessels requiring a bridge opening (vessels requiring a vertical clearance of 40 feet or more).

The range of vessel heights for Judge Seeber is presented in **Table 3**, on the following page.

TABLE 3
Distribution of Vessel Heights for Vessels Requiring Bridge Opening
Judge Seeber Bridge
November 2010-July 2011

RANGE OF VESSEL HEIGHT (ft)	TOTAL NUMBER OF VESSELS	PERCENT OF VESSELS (%)	ACCUMULATED % PASSING
40	1	0.10	0.10
41-45	13	1.33	1.43
46-50	637	65.13	66.56
51-55	106	10.84	77.40
56-60	79	8.08	85.48
61-65	23	2.35	87.83
66-70	21	2.15	89.98
71-75	4	0.41	90.39
76-80	10	1.02	91.41
81-85	5	0.51	91.92
86-90	6	0.61	92.54
91-95	3	0.31	92.84
96-100	12	1.23	94.07
101-105	6	0.61	94.68
106-110	16	1.64	96.32
111-115	3	0.31	96.63
116-120	19	1.94	98.57
121-125	2	0.20	98.77
>125	12	1.23	100.00
TOTAL=	978		

Assuming that a majority of the same vessels also pass at Florida Avenue, a vertical clearance, similar to the required clearances for vessels passing at the Judge Seeber Bridge, may be considered for the new Florida Avenue Bridge.

Table 4, on the following page, provides the number and duration of bridge openings for the Judge Seeber Bridge between November 2010 and July 2011.

TABLE 4
Number and Duration of Bridge Openings
Judge Seeber Bridge
November 2010-July 2011

MONTH/YEAR	NUMBER OF VESSELS	NUMBER OF OPENINGS	TOTAL TIME OPEN (Min.)
NOVEMBER 2010	122	122	1095
DECEMBER 2010	129	122	1195
JANUARY 2011	104	102	1065
FEBRUARY 2011	119	110	1007
MARCH 2011	108	102	1241
APRIL 2011	36	33	319
MAY 2011	86	80	613
JUNE 2011	143	139	1218
JULY 2011	154	147	1281
TOTAL	1001	957	9034
AVERAGE			
PERIOD	NUMBER OF VESSELS	NUMBER OF OPENINGS	TOTAL TIME OPEN
PER MONTH	111.2	106.3	1003.8
PER DAY	3.7	3.5	33.1
PER OPENING	1.0		9.4

After analyzing the data for the Judge Seeber Bridge, it was determined that the average number of openings per day is 3.5 and the average time per opening is 9.4 minutes.

Combined Bridge Data

Although some vessel entering the IHNC through the Mississippi River may turn around prior to transiting Florida Ave Bridge, in order to analyze combined bridge data, the heights of vessels from the Judge Seeber Bridge were used and assumed to be the same at the Florida Avenue Bridge.

As mentioned in **Table 2**, the total amount of vessels transiting the IHNC at Florida Avenue is 7908. In an effort to project the accumulated passing percentages of vessels at Florida Avenue Bridge, the 6930 vessels that would not require a bridge opening (less than 40 feet in height) at Judge Seeber Bridge were added to the following table.

TABLE 5
Distribution of Vessel Heights for All Vessels
November 2010-July 2011

RANGE OF VESSEL HEIGHT (ft)	TOTAL NUMBER OF VESSELS	CUMULATIVE NUMBER OF VESSELS (top to bottom)	CUMULATIVE NUMBER OF VESSELS (bottom to top)	PERCENT OF VESSELS (%)	CUMULATIVE % PASSING
≤40	6931	6913	7908	87.65	87.65
41-45	13	6944	977	0.16	87.81
46-50	637	7581	964	8.06	95.86
51-55	106	7687	327	1.34	97.21
56-60	79	7766	221	1.00	98.20
61-65	23	7789	142	0.29	98.50
66-70	21	7810	119	0.27	98.76
71-75	4	7814	98	0.05	98.81
76-80	10	7824	94	0.13	98.94
81-85	5	7829	84	0.06	99.00
86-90	6	7835	79	0.08	99.08
91-95	3	7838	73	0.04	99.11
96-100	12	7850	70	0.15	99.27
101-105	6	7856	58	0.08	99.34
106-110	16	7872	52	0.20	99.54
111-115	3	7875	36	0.04	99.58
116-120	19	7894	33	0.24	99.82
121-125	2	7896	14	0.03	99.85
>125	12	7908	12	0.15	100.00
TOTAL=	7908				

After analyzing vessel heights for the Judge Seeber Bridge, it was determined that 98.8% of the vessels required a clearance of 75 feet or less to pass under the existing bridge. It was also determined that 99.2% of the vessels are capable of passing the existing bridge at a 100 foot clearance and 99.85% of the vessels are capable of passing the existing bridge at a 125 foot vertical clearance. Assuming that a majority of the same vessels also pass at Florida Avenue, a vertical clearance similar to the required clearances for vessels passing at the Judge Seeber Bridge may be considered for the new Florida Avenue Bridge.

After identifying the *Cumulative Number of Vessels (bottom to top)* in **Table 5**, **Table 6** provides the average number of vessels requiring a bridge opening at 75 feet, 100 feet and 125 feet of bridge clearance in the closed position.

TABLE 6

**Average Number of Vessels Requiring Bridge Opening
November 2010-July 2011**

AVERAGE NUMBER OF VESSELS REQUIRING BRIDGE OPENING			
PERIOD	75' BRIDGE CLEARANCE (Closed Position)	100' BRIDGE CLEARANCE (Closed Position)	125' BRIDGE CLEARANCE (Closed Position)
Per Week	2.41	1.49	0.31
Per Month	10.44	6.44	1.33

IHNC Marine Industries

In an effort to further identify the height requirements of vessels traveling the IHNC at Florida Avenue, the maximum vessel sizes and type used by marine industries located near the existing IHNC Cargo Facilities (France Road and Jourdan Road terminals), were obtained. Based on phone contacts with marine industries along the IHNC, the type of vessels used by the majority of the contacted facilities are tug/barge vessels.

Conclusions and Recommendations

Since the closure of the MRGO, marine traffic patterns to port facilities and marine industries have changed. Vessels that once accessed the IHNC via the MRGO are only provided access through the limited parameters of the existing IHNC Lock. This has the potential to reduce the frequency of vessels requiring deep-draft access and vertical clearances near the current 156 foot vertical height requirement of the Florida Avenue Bridge. However, due to the *US Coast Guard Bridge Guide Clearances* recommending a vertical clearance of 155 feet and the Port's concern with a lower bridge affecting business on the IHNC and the New Orleans Business and Industrial District, the following conclusions are based on a 156' vertical clearance for moveable and fixed span bridges.

Moveable Span Bridge:

- The *New Florida Bridge over the Inner Harbor Navigational Canal-Final Environmental Assessment* completed in 2007, indicated that a moveable span bridge at Florida Avenue was unreliable due to the following factors: (1) the potential closure of the MRGO and increase in ship traffic on the IHNC, (2) increased ship capacity from the expanded parameters of the new IHNC Lock, (3) projected increases in required bridge openings and (4) the redevelopment of port facilities resulting in an increase of marine traffic.
- If moveable span bridges are considered, the recommended vertical clearance is 156 feet in the open position. The following recommendations presented in the *2004 Study of Marine Traffic through the Inner Harbor Navigation Canal at Florida Avenue* should also be considered for this study:
 - Consideration of operational regulations to marine traffic.
 - While no bridge operating under a US Coast Guard permit is built and has “openings by appointment”, it is suggested that once the bridge has been placed in service, opportunities for a Bridge Operation Regulation may be considered for the bridge. A full study of vehicular traffic crossing over the bridge and marine traffic crossing under the bridge would need to be developed and an application for an operation regulation may be needed to begin the Rule Making process.
 - If the study results show that a regulation is warranted, then a Notice of Proposed Rulemaking will be published in the Federal Register and advertised for comment.
 - If no opposition or only minor changes are required, a Final Rule may be published in the Federal Register.
 - After the appropriate process and time, the new bridge would have a Bridge Operation Regulation in 33 CFR § 117 which gives the bridge a specific operating schedule which could include (for example), a closure to marine traffic during peak traffic times, or a required 4 hour notice to open, or window of operation—whatever was deemed appropriate via the process.

Vertical Clearances for the moveable span bridge in the closed position will be evaluated in further stages of the study to determine the most feasible bridge height based on marine traffic.

Fixed Span Bridge:

156 Feet of Vertical Clearance- (Same Vertical Clearance of Existing Florida Avenue Rail Bridge).

Based on the analyzed bridge tender reports for 2010 and 2011 and data presented in the 2004 *Study of Marine Traffic through the Inner Harbor Navigation Canal at Florida Avenue*, vessels requiring vertical clearances greater than 100 feet continue to be a minimal percentage of the overall vessel traffic on the IHNC. However, there are several advantages to the fixed span bridge that provide vehicles with a reliable crossing. The following are the major advantages of a Fixed Span Bridge:

- *Advantages of a Fixed Span Bridge*
 - The 2007 *New Florida Bridge over the Inner Harbor Navigational Canal-Final Environmental Assessment* recommended a fixed span bridge to provide a reliable crossing over the IHNC for emergency evacuation and daily commuting.
 - If constructed, it will provide dual access to the proposed bridge for Orleans and St. Bernard parishes.
 - The fixed span bridge eliminates vehicle delay time due to bridge openings while providing uninterrupted traffic for marine vessels.

Due to the recent concerns expressed by the Port and the reliability of a fixed span bridge for vehicular and marine traffic, consideration has been given towards maintaining the evaluation of a fixed span bridge with a 156 foot vertical clearance.

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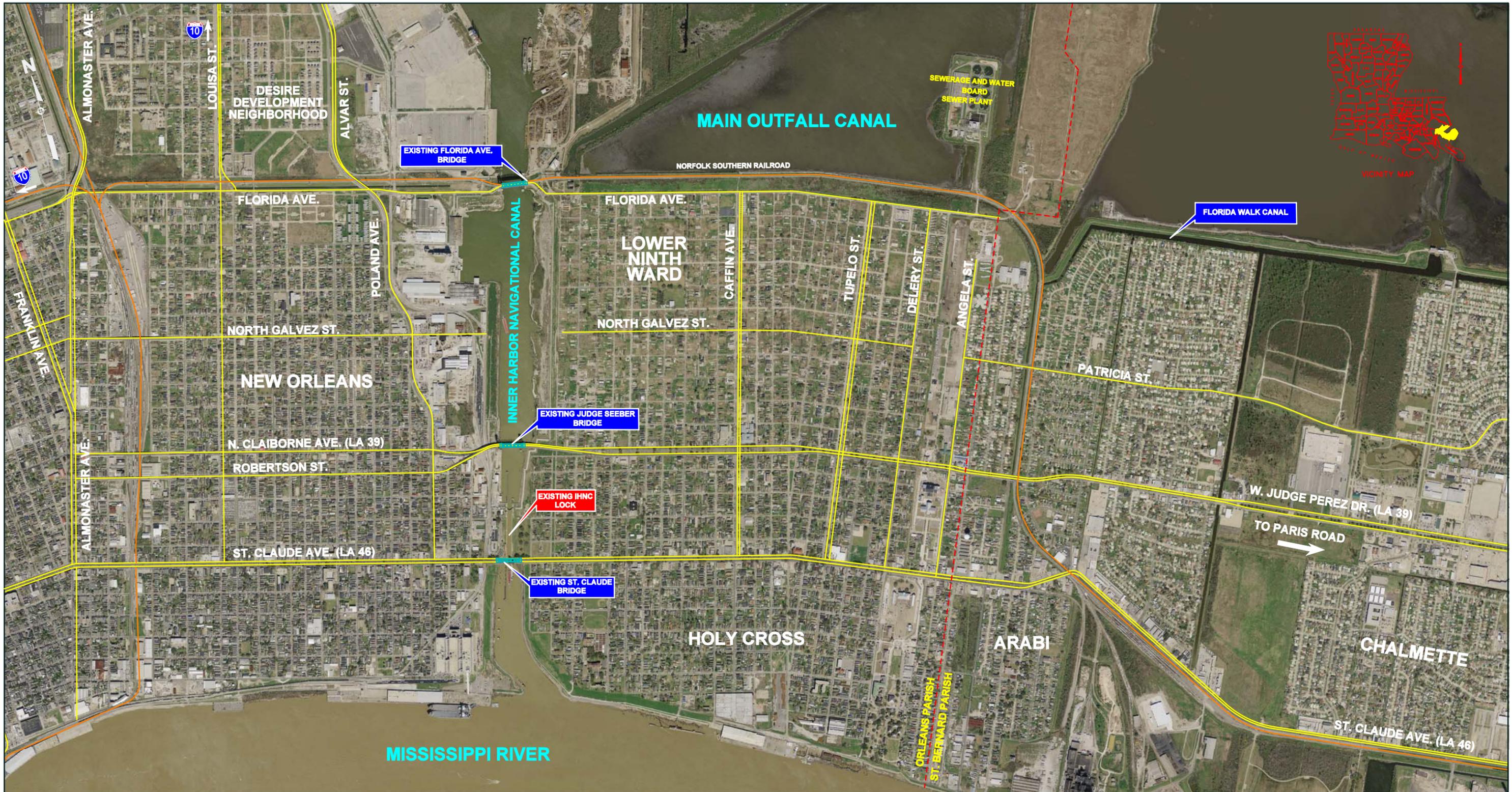
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APPENDICES

**APPENDIX A:
EXISTING VEHICULAR BRIDGES
AND
MAJOR ROADWAYS**



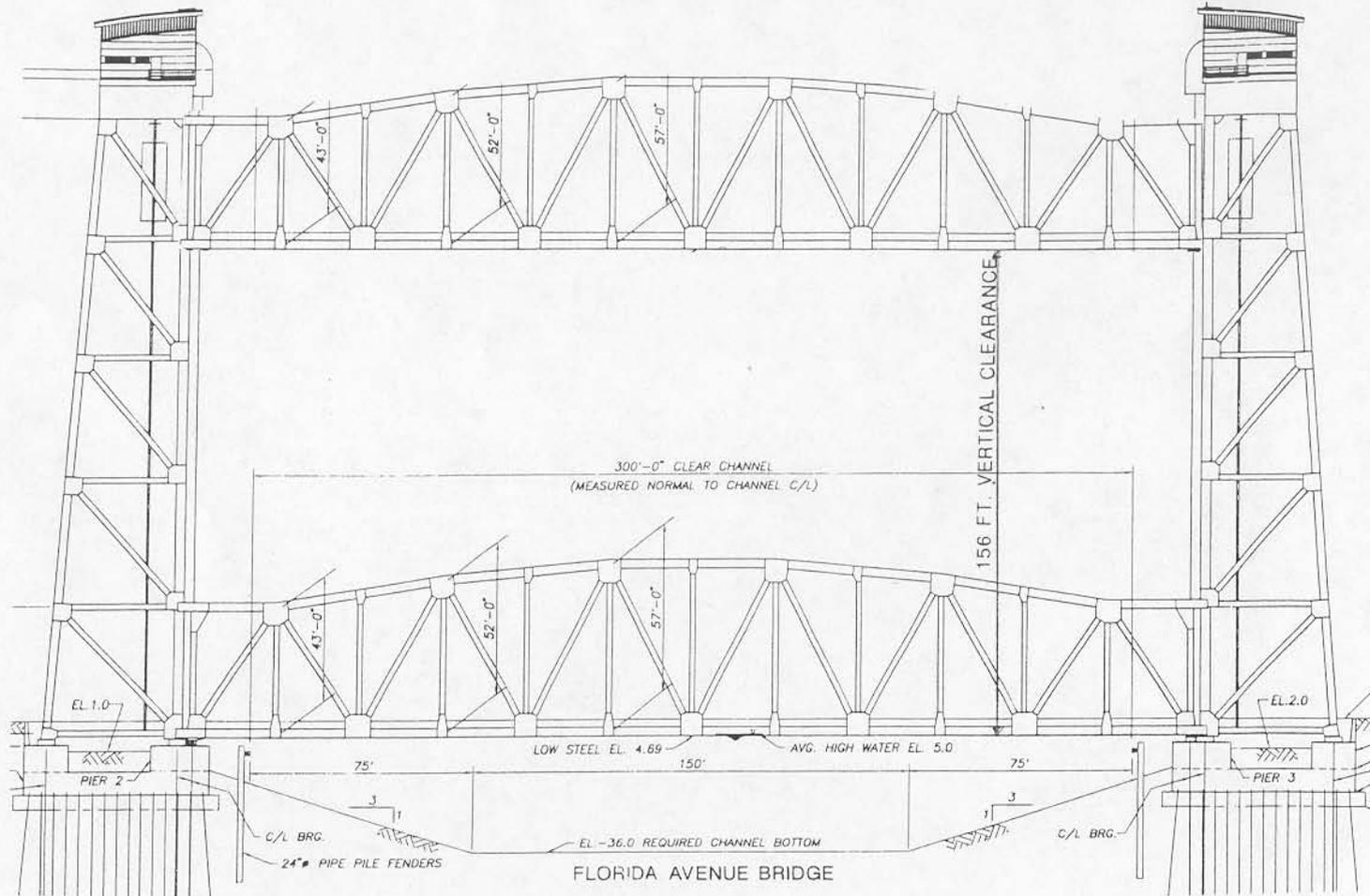
STUDY OF MARINE TRAFFIC THROUGH
 THROUGH THE IHNC AT FLORIDA AVENUE
 SUPPLEMENT NO. 1
 PARISH: ORLEANS, ST. BERNARD

**APPENDIX A:
 EXISTING VEHICULAR BRIDGES
 AND
 MAJOR ROADWAYS**

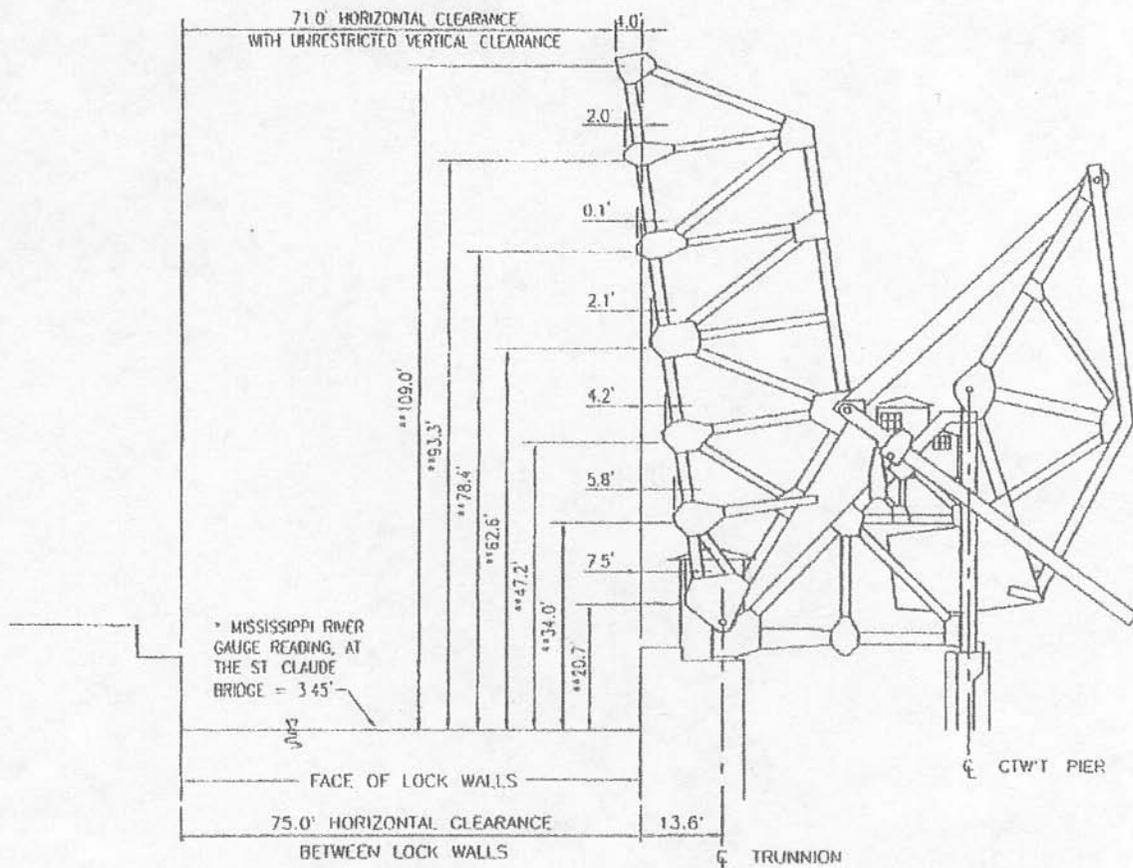
LOUISIANA DEPARTMENT OF
 TRANSPORTATION AND DEVELOPMENT
 RETAINER CONTRACT S.P. 700-89-0489
 TASK ORDER NO. 701-85-1501



APPENDIX B:
EXISTING FLORIDA AVENUE BRIDGE
CLEARANCES AND DIMENSIONS



APPENDIX C:
EXISTING ST. CLAUDE AVENUE BRIDGE
CLEARANCES AND DIMENSIONS



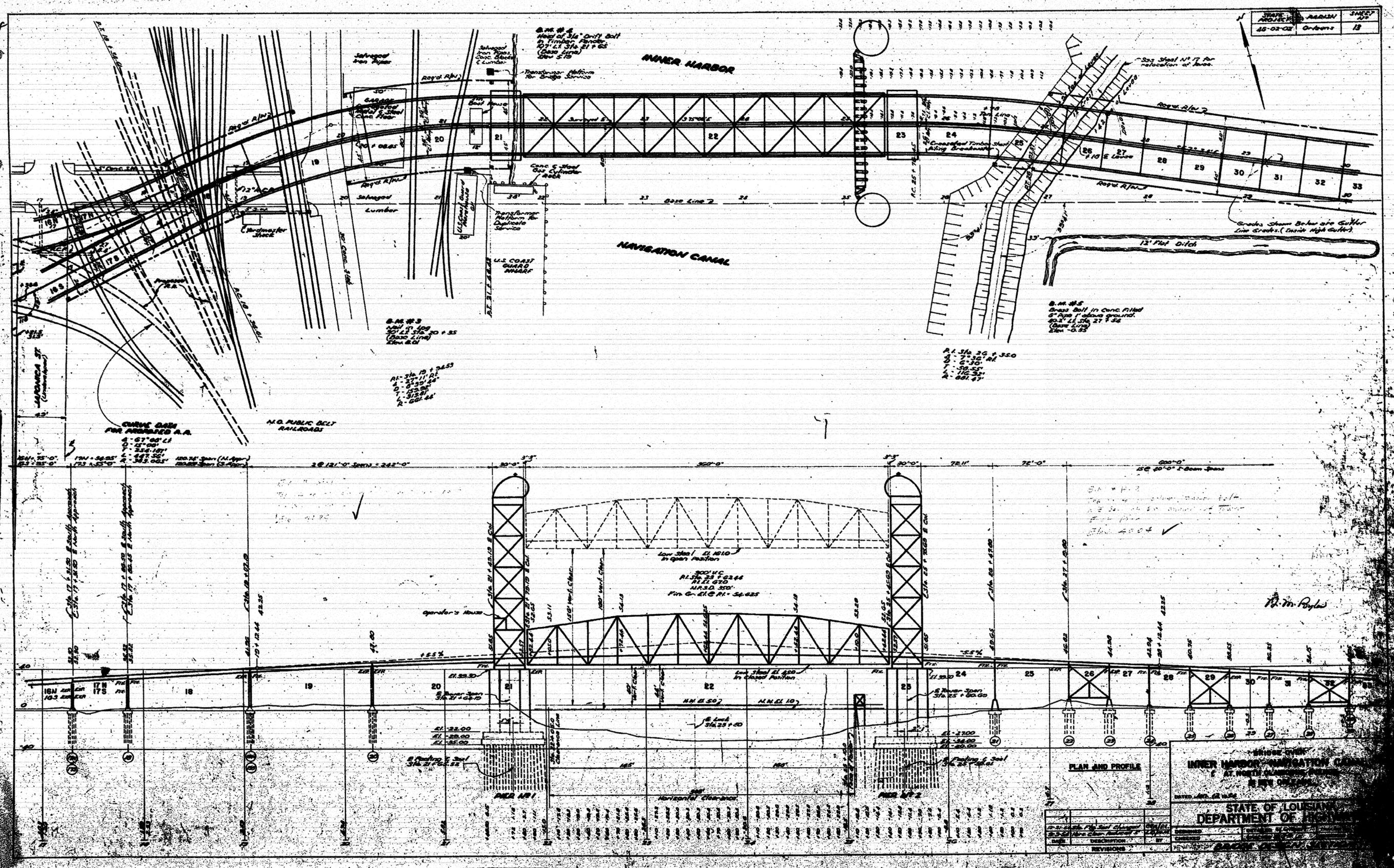
ST. CLAUDE AVE. BRIDGE
PORT OF NEW ORLEANS
INNER HARBOR -- NAVIGATION CANAL

NOTE: SURVEYED BY GANDOLFO KUHN, L.L.C
 5413 POWELL ST., STE A
 HARAHAN, LA 70123
 ON JUNE 2, 2006
 587-31

* CURRENT RIVER GAUGE READINGS AT ST. CLAUDE
 BRIDGE CAN BE OBTAINED BY CALLING THE CORPS
 OF ENGINEERS LOCK MASTER @ 504-559-8500

** VERTICAL DIMENSIONS SUBJECT TO
 SIGNIFICANT CHANGE DUE TO FLUCTUATIONS
 IN WATER LEVEL

APPENDIX D:
EXISTING JUDGE SEEBER BRIDGE
CLEARANCES AND DIMENSIONS



DATE	BY	REVISION
12-02-02	ORLEANS	13

ORLEANS
 FEDERAL PROJECT
 STATE PROJECT 046-31-0053

DESIGNED
 CHECKED
 DETAILED
 CHECKED
 DATE
 SHEET

NO.
 DATE
 REVISION DESCRIPTION
 BY



JUDGE WILLIAM SEEBER BRIDGE OVER
 INNER HARBOR-NAVIGATION CANAL
 LA. 39 - NORTH CLAIBORNE AVENUE
 EXISTING PLANS
 STATE OF LOUISIANA
 DEPARTMENT OF HIGHWAYS



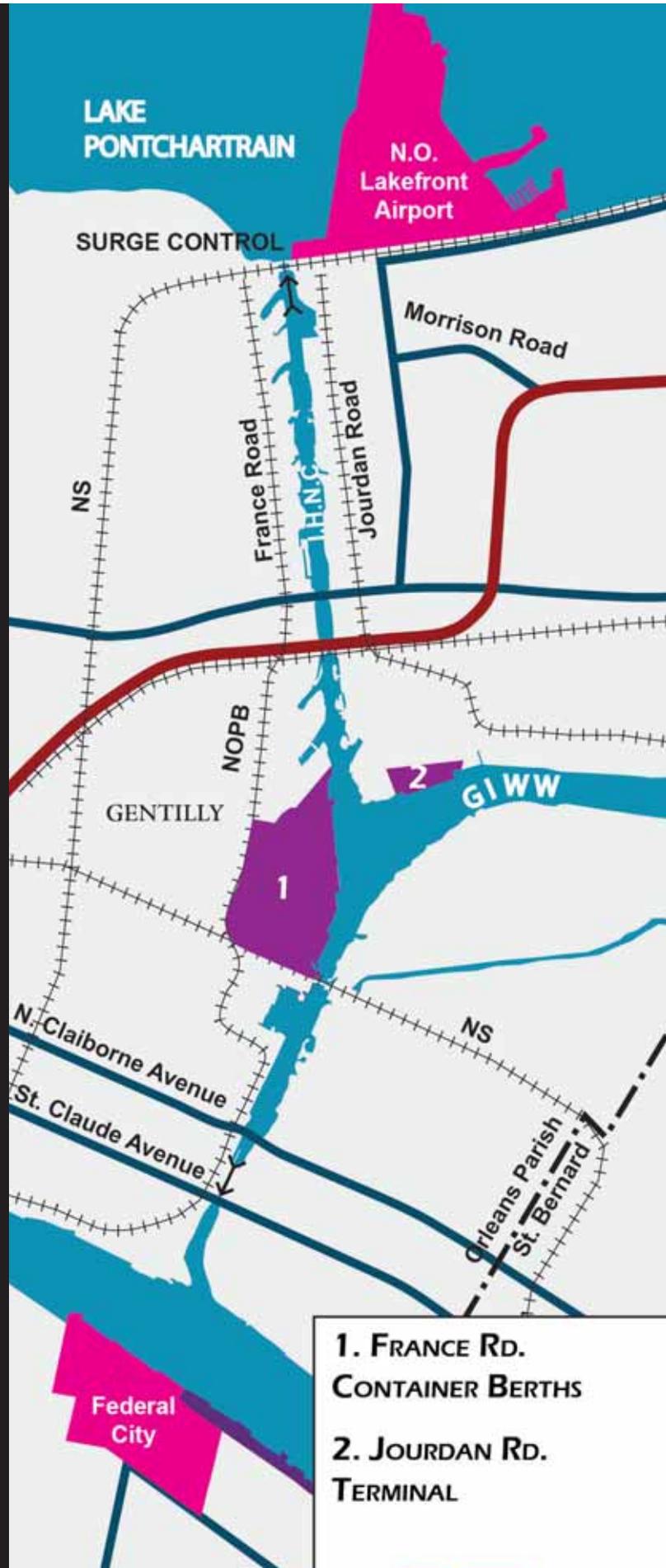
APPENDIX E:
MAP OF INNER HARBOR
NAVIGATIONAL CANAL
PORT CARGO FACILITIES

Inner Harbor Cargo Facilities

France Road Container
Terminal Berth 1page 42

France Road Container
Terminal Berths 4 & 5page 42

Jourdan Road Terminalpage 43



- 1. FRANCE RD. CONTAINER BERTHS
- 2. JOURDAN RD. TERMINAL



TERMINAL	FRANCE ROAD CONTAINER TERMINAL BERTH 1
Tenant	The Kearney Companies
River Mile, Location	Western Side of Industrial Canal
Primary Cargoes	Containerized Cargo
Project Depth	30 ft (9-10 meters)
# of Berths	1
Length of Berth	830 feet (253 meters)
Total Acreage	34.6 acres
Covered Storage	67,019 square foot shed (6, 226 sq. meters)
Railroad Connection	Serviced by New Orleans Public Belt Railroad
Highway Connection	France Road to Interstate 10
Special Features	2.6 million sq. feet marshalling area (241,547 square meters); 147 foot wide wharf (45 meters)

TERMINAL	FRANCE ROAD CONTAINER TERMINAL BERTHS 4 & 5
Terminal Operator	Unassigned, please contact Port of New Orleans Customer Service (see page 33)
Location	Western Side of the Industrial Canal
Project Depth	29 feet
# of Berths	3
Length of Berth	2400 ft
Total Acreage	81.4
Covered Storage	131,200 sq ft
Railroad Connection	serviced by New Orleans Public Belt Railroad
Highway Connection	France Road to Interstate 10
Special Features	ro/ro ramp, crane rails

TERMINAL OPERATOR	THE KEARNEY COMPANIES
Address	4000 France Road Pkwy
Telephone	504-831-0266
Fax	504-831-7669
Key contact	David Kearney 504-831-0266 dkearney@kearneycompanies.com

FACILITIES



TERMINAL NAME	JOURDAN ROAD TERMINAL
Terminal Operators	New Orleans Cold Storage (see page 30)
Location	Eastern side of the Inner Harbor Navigational Canal, where it meets the Gulf Intracoastal Waterway
Primary Cargoes	breakbulk cargo
Project Depth	29 feet (8.8 meters)
# of Berths	2
Length of Berth	1,400 square feet (426 meters)
Total Acreage	19.6
Covered Storage	200 feet x 800 ft. refrigerated warehouse with the capacity to store 55 million pounds of refrigerated cargo
Equipment	Blast freezing system capable of freezing meat products to 0 degrees F within 24 hours
Railroad Connection	Serviced by New Orleans Public Belt on front and rear apron
Special Features	24 dock doors on the truck/ container side of the warehouse four main freezer doors on the vessel side
Additional Services Offered	Daily freezing capacity of 1.2 million lbs. of fresh products

APPENDIX F:
PORT OF NEW ORLEANS LETTER
ADDRESSED TO LADOTD



GARY P. LAGRANGE, PPM
President and Chief
Executive Officer

October 10, 2011

Ms. Sherri Labas
Secretary
Louisiana Department of Transportation and Development
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

Dear Secretary Labas:

This letter concerns the proposed construction of a bridge crossing the Inner Harbor Navigation Canal (IHNC) at Florida Avenue in New Orleans. Funding for construction of this bridge (\$129 million), among other projects, was approved through the 1989 Transportation Trust Fund Program. During the twenty-two year period that has elapsed since the program was approved by a statewide referendum, construction of the bridge has been delayed for a variety of reasons; different design options have been considered; and costs have escalated. It now appears that funding for bridge construction is no longer available. In light of the requirement to build the bridge and the lack of adequate funds, the Louisiana Department of Transportation and Development (DOTD) appears to favor construction of a lower fixed span bridge – the smallest, least-costly alternative. Regrettably, construction of such a bridge will have a significant detrimental impact on two important regional economic engines: the IHNC and the New Orleans Business and Industrial District.

In 2007, the Board of Commissioners of the Port of New Orleans (Port) constructed a vertical lift span bridge with a maximum vertical clearance of 156 feet and horizontal clearance of 300 feet at Florida Avenue. In order to accommodate maritime traffic and preserve the utility and economic development potential of properties situated along of the IHNC and the Gulf Intracoastal Water Way (GIWW), the Port adhered to deep-draft dimensional requirements mandated by the U. S. Coast Guard in constructing the bridge. Vessels access marine terminals and facilities located in this area via the IHNC Lock which is large enough to accommodate deep-draft vessels which may require an air draft of as much as 156 feet for safe clearance. Notably, the Port has an active marine terminal at Jourdan Road which is served by deep-draft ships and is actively seeking operators for its deep-draft terminal at France Road. Clearly, construction of a new low fixed span bridge will effectively negate the functionality the Port's Florida Ave Bridge of as well as the investment of \$45 million of public funds.

Prior to closure of the Mississippi River Gulf Outlet (MRGO), which had also provided access to this inner harbor area, vertical limitation was imposed by the Paris Road Bridge at 142 feet. A minimum 142-foot vertical clearance must be maintained to avoid significant adverse economic impacts. However, a 156-foot clearance would not only accommodate an increased number of deep-draft vessels, but would also facilitate the development of businesses involved in the construction

BOARD OF COMMISSIONERS OF THE PORT OF NEW ORLEANS

Post Office Box 60046 * New Orleans, Louisiana 70160 * Tel: 504-528-3203 * Fax: 504-528-3397

Ms. Labas
October 10, 2011
Page 2

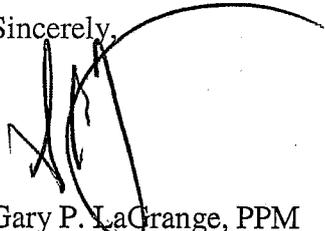
of marine service craft and offshore structures and equipment commonly used in Louisiana's energy industry.

As an alternative to construction of another bridge in this corridor, the Port proposes that its Florida Avenue Bridge be adapted to meet the State's needs. State funding would be more wisely spent to improve approach roadways adjacent to the bridge which will enable it to efficiently accommodate vehicular traffic. However, should DOTD determine that a fixed span bridge is required at Florida Avenue, the Port strongly requests that its clearances be equal to the vertical and horizontal clearances of the existing Florida Avenue and Judge Seeber (Claiborne Avenue) Bridges.

In summary, the Port cannot support the construction of a low fixed span bridge at Florida Avenue. Building such a bridge would hinder the Port's mission to advance the maritime industry in the region and may constitute a taking of Port property by severely reducing its utility and value. As a result, the Port may be forced to seek compensation for its loss. Moreover, should DOTD opt to lessen vertical and horizontal clearance limits from what is available to Port users today, significant public and private infrastructure investment will be diminished and the cargo growth and other maritime-related industrial development will be significantly restricted. This is an outcome that we should expend every effort to avoid.

We look forward to working closely with you to find an amicable and viable solution to this important issue.

Sincerely,



Gary P. LaGrange, PPM

GPL/crp

cc: Eric Kalavoda, LADOTD
Connie Porter Betts, P.E., LADOTD
David Frank, USCG
Jacob Loeske, Buchart Horn
Alan Krouse, Buchart Horn
Walter Brooks, Regional Planning Commission

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APPENDIX G:
MAP OF COMMERCIAL WATERWAYS CONNECTED BY
THE INNER HARBOR NAVIGATIONAL CANAL (IHNC)

